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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,530	02/09/2001	Willy Sagefalk	STGUP008	5601

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EXAMINER

YE, LIN

ART UNIT PAPER NUMBER

2622

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,530

Applicant(s)

SAGEFALK ET AL.

Examiner

Lin Ye

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/15/05 has been entered.
2. This application has been transferred to a new examiner. The new examiner carefully reviewed applicants' arguments with respect to the claims 1-7 filed on 11/15/05.
3. Applicants' arguments filed 11/15/05 have been fully considered but they are not persuasive as to claims 1-7.

For the claim 1, the applicants argue that the Nicholson reference (U.S. Patent 5,543,954) discloses the limited field of view swept out by the Nicholson mirrors as a result of the mirror configuration corresponded with a cylindrical strip around the "Y" axis of the Nicholson camera; the applicant's panning and tilting mechanism in which the tilting mirror tilts the optical input path to the camera through a broad angular range and the angle of incidence of the optical input path and the tilting mirror varies during tilting; and the hemispherical field of view swept out by the applicant's panning and tilting mirrors differed

markedly from the significantly more limited cylindrical strip field of view provided by the Nicholson mirrors (See applicant's REMARKS, page 5, lines 16-27)

The examiner disagrees. The Nicholson reference discloses the field of view is almost **spherical**, and almost any point (arc of 360° around the Y-axis) can be scanned by rotating first mirror (tilting mirror 12) about its Y-axis (See Col. 5, lines 14-41). Therefore, the Nicholson mirrors does not corresponded with a cylindrical strip around the "Y" axis of the Nicholson camera field of view, and the optical input path to the camera through a broad angular range and the angle of incidence of the optical input path and the tilting mirror varies during tilting. Nicholson's mirrors (14 and 12) are considered as "panning mirror" and "tilting mirror" recited in claim 1.

For the claim 2, the applicants argue that the Nicholson's belt drive is not the applicant's planetary linkage.

The examiner disagrees. The Nicholson reference shows in Figures 1 and 3, the mirror assembly (22) coupling the panning mirror (14) and the tilting mirror (12) and including: a mirror wheel (x-axis drive ring element 76); a guide wheel (primary drive ring element 34); a planetary member (y-axis drive belt element 90) which is mechanically coupled to the guide wheel together with the mirror wheel. Therefore, the mirror assembly is considered as "a planetary linkage" recited in claim 2.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-7 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to the amended claims 1, 4 and 6, the applicants amended the claims that cited “tilting **toward and away** from the panning mirror about an axis **substantially perpendicular to a plane defined by the optical path**” is not described in the specification.

The applicants’ specification only discloses, “the tilting mirror 10 is mounted, so that the axis of rotation therefore is perpendicular to the optical center axis of the camera” (See page 6, lines 5-7) and “ the tilting mirror 10 is rotated with respect to the mirror wheel 5, and the center axis of the field of view will be angled with respected to the optical center of the camera” (See page 6, lines 29-32).

It should be noted that a plane is a two-dimensional group of points that goes on infinitely in all directions; made up of infinite lines according to geometry glossary; and the optical path is a one-dimensional of points (line). Therefore, only one optical path **cannot define** a plan.

Referring to dependent claims 2,3, 5 and 7, these claims refer to the claims 1, 4 and 6. Therefore, they are rejected same as claims 1, 4 and 6 under 35 U.S.C. 112, first paragraph.

Appropriate correction is required.

For examination purpose, this claim will be interpreted as it is best understood.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nicholson U.S. Patent 5,543,954.

Referring to claim 1, Nicholson discloses in Figures 1 and 3, an apparatus for panning and tilting an optical input to an objective of a camera; and the apparatus comprising: a panning mirror (e.g., mirror element 14 shown in Fig. 3, wherein a camera is attached to ring element 38 as disclosed on column 4, lines 1-3) rotationally coupled to the camera for bending the optical input to align with an optical axis of the objective, and for panning the optical input to the objective of the camera about the optical axis; and a tilting mirror (e.g., mirror element 12 of Figs. 1 and 3; column 5, lines 14-39) radially displaced from the panning mirror about the optical axis, and rotationally coupled to the camera for rotation concentric with the panning mirror about the optical axis, and the tilting mirror optically coupled with the panning mirror and tilting toward and away from the panning mirror about an axis substantially perpendicular to a plane defined by the optical path (e.g., the Y-axis is considered as optical path, the tilting mirror 12 rotating arc of 360° around the Y-axis, therefore, the rotating of mirror 12 respected

to the panning mirror 14 is considered as substantially perpendicular to a plane containing a optical path Y-axis) to tilt the optical input in selectable amounts (e.g., the field of view is almost **spherical**, and almost any point (arc of 360° around the Y-axis) can be scanned by rotating first mirror (tilting mirror 12) about its Y-axis (See Col. 5, lines 14-41).

Referring to claim 2, the Nicholson reference discloses the apparatus of claim 1, further comprising: a planetary linkage (mirror assembly 22) coupling the panning mirror (14) and the tilting mirror (12), and including a mirror wheel rotatable about the optical axis, and the panning mirror affixed to the mirror wheel and the tilting mirror tiltably affixed to the mirror wheel both for rotation about the optical axis (e.g., the x-axis drive ring element 76 of Fig. 2, wherein the x-axis drive ring is affixed to both the panning mirror and the tilting mirror for rotation about the optical axis as illustrated in Fig. 2; column 4, lines 52-55); a guide wheel rotatable about the optical axis (e.g., primary drive ring element 34 of Fig. 2); and a planetary member mechanically coupled to both the guide wheel together with the mirror wheel such that a relative rotation there between produces a rotation of the planetary member and the planetary member further coupled to the tilt mirror such that the rotation of the planetary member effects the tilting of the mirror (e.g., the planetary member is the y-axis drive belt element 90 which is mechanically coupled to the guide wheel as shown in Figs. 1 and 3 and the guide wheel is mechanically coupled to the mirror wheel and as such the planetary member is mechanically coupled to both the guide wheel together with the mirror wheel. Further, as described on column 5, lines 14-25 a brake is used to hold mirror wheel 76 so as to cause relative rotation between the guide wheel and the mirror wheel and thus

Art Unit: 2622

produce rotation of the planetary member element 90 which in turn effects the tilting of the mirror).

Referring to claim 3, the Nicholson reference discloses the apparatus of claim I, wherein the panning mirror couples to the camera for panning the optical input throughout an entire 360 degrees about the optical axis (e.g., column 5, lines 33-34).

Referring to claims 4-7, the Nicholson reference discloses all subject matter as discussed with respected same comments to claims 1-2.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Lin Ye', with a long horizontal flourish extending to the right.

Lin Ye
Primary Examiner
Art Unit 2622

April 7, 2006